Listing of Claims:

1. (Currently Amended) A radar oscillator comprising:

an oscillation unit comprising: (i) an amplifier, (ii) an LC resonator which is connected to the amplifier, has at least an inductance component and a capacitance component, and resonates at a predetermined resonant frequency, and (iii) a feedback circuit which performs positive feedback from an output side of the amplifier to an input side of the amplifier, the oscillation unit outputting an oscillation signal having a frequency determined by the resonant frequency of the LC resonator;

a first switch circuit which is connected to a power supply unit and to the amplifier of the oscillation unit, and which turns off an electric power supply by the power supply unit to the amplifier in a period in which a pulse signal representing a transmitting period for transmitting the oscillation signal as a transmitting radar signal is not input to set the oscillation unit in a non-oscillation state, and turns on the electric power supply by the power supply unit to the amplifier in a period in which the pulse signal is input to set the oscillation unit in an oscillation state; and

a second switch circuit which is connected to the power supply unit and to the LC resonator of the oscillation unit, and which turns on the electric power supply by the power supply unit

to the LC resonator in a predetermined period immediately before the pulse signal is input in a period in which the pulse signal is not input to supply a predetermined current to the LC resonator, and turns off the electric power supply by the power supply unit to the LC resonator at a timing at which the pulse signal is input to stop the supply of the predetermined current to the LC resonator, so that activation of an oscillation operation of the oscillation unit is accelerated;

wherein the LC resonator is formed by a parallel resonant circuit constituted by a coil and a capacitor; and

wherein the coil has an intermediate tap and the feedback circuit includes a buffer connected to the intermediate tap of the coil.

Claims 2 and 3 (Canceled).

4. (Original) The radar oscillator according to claim 1, wherein the LC resonator is formed by a λ/4 transmission path.

5. (Currently Amended) ~~The~~ A radar oscillator ~~according to claim 1,~~ comprising:

an oscillation unit comprising: (i) an amplifier, (ii) an LC resonator which is connected to the amplifier, has at least an inductance component and a capacitance component, and resonates

at a predetermined resonant frequency, and (iii) a feedback circuit which performs positive feedback from an output side of the amplifier to an input side of the amplifier, the oscillation unit outputting an oscillation signal having a frequency determined by the resonant frequency of the LC resonator;

a first switch circuit which is connected to a power supply unit and to the amplifier of the oscillation unit, and which turns off an electric power supply by the power supply unit to the amplifier in a period in which a pulse signal representing a transmitting period for transmitting the oscillation signal as a transmitting radar signal is not input to set the oscillation unit in a non-oscillation state, and turns on the electric power supply by the power supply unit to the amplifier in a period in which the pulse signal is input to set the oscillation unit in an oscillation state; and

a second switch circuit which is connected to the power supply unit and to the LC resonator of the oscillation unit, and which turns on the electric power supply by the power supply unit to the LC resonator in a predetermined period immediately before the pulse signal is input in a period in which the pulse signal is not input to supply a predetermined current to the LC resonator, and turns off the electric power supply by the power supply unit to the LC resonator at a timing at which the pulse signal is input to stop the supply of the predetermined current

to the LC resonator, so that activation of an oscillation operation of the oscillation unit is accelerated;

wherein:

the LC resonator includes first and second LC resonators formed by parallel resonant circuits, respectively, each of the parallel resonant circuits being constituted by a coil and a capacitor,

the amplifier includes a first transistor connected from a collector thereof to the first LC resonator,

the feedback circuit includes a second transistor connected from a collector thereof to the second LC resonator,

a signal output from the collector of the first transistor or the first LC resonator is received by a base of the second transistor, and

a signal output from the collector of the second transistor or the second LC resonator is input to a base of the first transistor.

6. (Original) The radar oscillator according to claim 5, wherein the coils of the first and second LC resonators have intermediate taps, respectively, and first and second buffers connected between the intermediate taps of the coils and the bases of the first and second transistors, respectively, are arranged in the feedback circuit.

7. (Original) The radar oscillator according to claim 5, wherein the first and second LC resonators are formed by λ/4 transmission paths, respectively.

8. (Previously Presented) The radar oscillator according to claim 5, comprising a third switch circuit which connects output terminals of the first and second LC resonators to each other until a predetermined period has elapsed after inputting of the pulse signal is stopped, thereby accelerating convergence of the oscillation signal.

9. (Previously Presented) The radar oscillator according to claim 6, comprising a third switch circuit which connects output terminals of the first and second LC resonators to each other until a predetermined period has elapsed after inputting of the pulse signal is stopped, thereby accelerating convergence of the oscillation signal.

10. (Previously Presented) The radar oscillator according to claim 7, comprising a third switch circuit which connects output terminals of the first and second LC resonators to each other until a predetermined period has elapsed after inputting of the pulse signal is stopped, thereby accelerating convergence of the oscillation signal.